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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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09/334,208 06/15/99 DAVIS

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QM01/0505

EXAMINER

SOLAK, T

ART UNIT

PAPER NUMBER

3746

DATE MAILED:
05/05/00

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.
09/334,208

Applicant(s)
Davis

Examiner
Timothy P. Solak

Group Art Unit
3746



☒ Responsive to communication(s) filed on Jun 15, 1999

☐ This action is **FINAL**.

☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire 3 month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

Disposition of Claims

☒ Claim(s) 1-13 is/are pending in the application.

Of the above, claim(s) _____ is/are withdrawn from consideration.

☐ Claim(s) _____ is/are allowed.

☒ Claim(s) 1-13 is/are rejected.

☐ Claim(s) _____ is/are objected to.

☐ Claims _____ are subject to restriction or election requirement.

Application Papers

☒ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

☒ The drawing(s) filed on Jun 15, 1999 is/are objected to by the Examiner.

☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.

☒ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☐ All ☐ Some* ☐ None of the CERTIFIED copies of the priority documents have been
☐ received.

☐ received in Application No. (Series Code/Serial Number) _____.

☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____

☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

☒ Notice of References Cited, PTO-892

☐ Information Disclosure Statement(s), PTO-1449, Paper No(s). _____

☐ Interview Summary, PTO-413

☒ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Notice of Informal Patent Application, PTO-152

--- SEE OFFICE ACTION ON THE FOLLOWING PAGES ---

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DETAILED ACTION

Drawings

1. This application has been filed with informal drawings which are acceptable for examination purposes only. Formal drawings will be required when the application is allowed.
2. The drawings are objected to under 37 CFR 1.83(a) because they fail to show the valve arrangement used to "exhaust gas from pneumatic clutch 28", as described in the specification (page 5, line 2). Any structural detail that is essential for a proper understanding of the disclosed invention should be shown in the drawing. MPEP § 608.02(d). Correction is required.

Specification

3. The abstract of the disclosure is objected to because recitation of "Method and apparatus reduce" would be clearer if rewritten --Method and apparatus for reducing-- . Correction is required. See MPEP § 608.01(b).
4. The disclosure is objected to because of the following informalities: recitation of "through line 28" (page 4, lines 16-17) should read --through line 38--. Appropriate correction is required.

Claim Rejections - 35 USC § 112

5. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to

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make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

6. Claims 1-13 are rejected under 35 U.S.C. 112, first paragraph, as based on a disclosure which is not enabling. Deflation of the clutch bladder 58, is critical or essential to the practice of the invention, but not included in the claim(s) is not enabled by the disclosure. See *In re Mayhew*, 527 F.2d 1229, 188 USPQ 356 (CCPA 1976). Intermittent operation of the pump is achieved by inflation and deflation of clutch bladder 58. "Solenoid 88 is actuated to provide gas to the clutch 28 through line 38 or to exhaust gas from the clutch 28" (page 5, line 9). There is no disclosure how the low pressure gas is returned to the system through line 38. Without deflation of the clutch bladder intermittent operation of the pump is not possible.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 1-2 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Turner et al. (3,247,798), in view of Dower et al. (3,893,525). Turner et al., teach a method of pumping an oil well, consisting of: removing the liquid from the bottom of the well, in order to maintain an inflow of hydrocarbons from a producing formation (column 1, line 31); and reducing the duty cycle of the pump, by intermittent operation. Turner et al., further teach a method to control the

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pump cycle based on periodic time intervals and the level within the well (column 6, line 19).

Turner et al., however, does not disclose a method that includes a clutch. Dower et al., disclosing a control system for an oil rig, teaches a method of: connecting an engine to a pump assembly through a pneumatically actuated clutch (column 5, line 5); determining a selected event to actuate the clutch (column 9, page 62); and providing pressurized gas on occurrence of the selected event to actuate the clutch (column 10, line 8). Dower et al., teach this method advantageously increased the efficiency of the unit (column 1, line 44). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have used the method taught by Dower et al., in the method disclosed by Turner et al., to have advantageously increased the unit's efficiency.

9. Claims 3-4 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Turner et al., in view of Dower et al. (both previously mentioned), in further view of Gallaway (3,075,467). Turner et al., teach a method of controlling a pumping cycle, based on both, periodic time intervals and the liquid level within the well (column 6, line 19). Although, Turner et al., disclose a method of supplying a source of pressurized gas, they do not disclose the source to be from the well. Gallaway, disclosing a means of pumping liquids from a gas well, specifically teaches a method using pressurized gas from the well to activate the pump (column 3, line 20). Gallaway, teaches this method was advantageously cost effective (column 1, line 25). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made

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to have used the method taught by Gallaway, in the method disclosed by Turner et al., to have advantageously lowered the cost incurred by the method.

Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Turner et al., in view of Dower et al. (both previously mentioned), in further view of Kuehn, III et al. (4,392,782). Turner et al., teach a method of pumping an oil well, including: reducing the duty cycle of the pump, by intermittent starting and stopping of the pump; and removal of a liquid from the bottom of the well in order to maintain an inflow of hydrocarbons from a producing formation (column 1, line 31). Although, Turner et al., teach a method of monitoring the level in a well, they do not determine the level by direct contact with the liquid. Kuehn, III et al., disclosing a liquid level controller for oil wells, specifically teach a method consisting of: directly monitoring the liquid level inside a well (column 2, line 66) and actuating a pump to maintain the level between selective elevations (column 9, line 16). Kuehn, III et al., teach this method advantageously increased the efficiency and convenience of maintaining a liquid level in the well (column 9, line 16). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have used the method taught by Kuehn, III et al., in the method disclosed by Turner et al., to have advantageously increased the methods efficiency.

10. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Turner et al., in view of Dower and Kuehn, III et al., in further view of Gallaway (all previously mentioned). Although, Turner et al., teach most of the limitations of the claim, including a method of supplying a pressurized gas, they do not disclose the gas to be supplied from the well. Gallaway, disclosing

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a means of pumping liquids from a gas well, specifically teaches a method comprising the use of pressurized gas, from a well, to activate a pump (column 3, line 20). Gallaway, teaches this method was advantageously cost effective (column 1, line 25). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have used the method taught by Gallaway, in the method disclosed by Turner et al., to have advantageously lowered the cost of the method.

11. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Dye (2,634,682), in view of Dower et al. (previous mentioned). Dye teaches an oil well pumping assembly comprising: an engine 1, which drives a pump 13; and a control unit 4, for starting and stopping the pumping cycle. Dye, however, does not disclosed the use of a pneumatic clutch. Dower et al., disclosing a drilling control system, specifically teach a pneumatic clutch 92, connected between engine 54 and pump 46, actuated by a control unit 92 (column 9, line 61 and column 10, line 36). Dower et al., teach the pneumatic clutch advantageously engaged and disengaged the pump (column 10, line 2). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have used the pneumatic clutch taught by Dower et al., in the pump unit disclosed by Dye, to have advantageously controlled the operation of the pump.

Claim 10 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dye, in view of Dower et al., in further view of Gallaway (all previous mentioned). Although, Dye and Dower et al., teach most of the limitations of the claims, including use of a pneumatic clutch; and a timer 4 (Dye) used to control the pumping cycle, they do not, disclose the pressurized gas to be

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supplied from a well. Gallaway, disclosing a well pumping unit, specifically teaches the well, being pumped, supplies the pressurized gas to drive the pump (column 3, line 20). Gallaway teaches using the well as a source of pressurized gas was advantageously cost effective (column 1, line 25). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have used the gas supply taught by Gallaway, in the pump unit disclosed by Dye, to have advantageously lowered the cost of production.

12. Claim 12 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dye, in view of Dower et al., in further view of Kuehn, III et al. (all previous mentioned). Dye and Dower et al., teach most of the limitations of the claims, including an oil well pumping unit and a controller used to regulate the pumping cycle. Dye and Dower et al., however, do not disclose the use of a level indicator to activate the pump. Kuehn, III et al., disclosing a liquid level controller for oil wells, specifically teach the use of thermistors 68 and 70 to monitor the level of liquid inside the well (column 2, line 66). Kuehn III, et al., further teach, the liquid level controller 10 receives signals from the sensors 68 and 70 and cycles the pump on and off to maintain the level below a maximum height. Kuehn, III et al., teach the thermistors advantageously increased the efficiency and convenience of maintaining a liquid level (column 9, line 16). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have used the thermistors taught by Kuehn, III et al., with the pump unit disclosed by Dye, to have advantageously increased the units efficiency.

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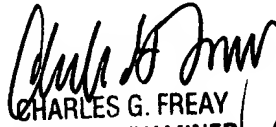
Conclusion

13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Timothy P. Solak whose telephone number is (703) 308-6197. The examiner can normally be reached on Monday through Thursday from 7:30 am to 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy S. Thorpe, can be reached on (703) 308-0102. The fax phone number for the organization where this application or proceeding is assigned is (703) 305-3588.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0861.


CHARLES G. FREAY
PRIMARY EXAMINER



TPS

April 28, 2000